

Applic. No. 10/667,568

Amdt. dated December 9, 2004

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Claim Amendments

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (original): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness of between 10 and 25 μm ;

applying glue to the first and second metal foils,

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

providing the metal foil-brazing medium particle fraction with a maximum diameter of 0.08 mm and a minimum diameter of 0.02 mm for a metal foil thickness of substantially 0.02 mm.

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Claim 2 (original): A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25 μm ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

filling the wedge with brazing medium having a mass ML in the wedge; and

setting a ratio ML/DF of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils to be substantially between 8 g/m and 16 g/m.

Claim 3 (original): A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25 μm ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

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filling the wedge with brazing medium having a mass ML in the wedge; and

setting an upper limit of the mass ML of the brazing medium dependent on the metal foil thickness DF given by an intersection of coordinates for (ML/DF; DF) of (14.8 g/m; 0.025 mm), (16 g/m; 0.02 mm) and (27 g/m; 0.01 mm), with ML/DF being a ratio of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils.

Claim 4 (original): The method according to claim 2, wherein the mass ML of the brazing medium has a lower limit dependent on the metal foil thickness DF given by an intersection of and lying along a curve passing through coordinates for (ML/DF; DF) of (9 g/m; 0.025 mm), (9.2 g/m; 0.02 mm) and (16 g/m; 0.01 mm).

Claim 5 (original): A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25 μm ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

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filling the wedge with brazing medium having a mass ML in the wedge; and

setting the mass ML of the brazing medium to be dependent on the metal foil thickness DF and to lie along an intersection of coordinates for (ML/DF; DF) of (11.2 g/m; 0.025 mm), (12 g/m; 0.02 mm) and (20 g/m; 0.01 mm), with ML/DF being a ratio of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils.

Claim 6 (original): The method according to claim 2, wherein the ratio ML/DF of the mass of the brazing medium ML in the wedge to the metal foil thickness DF is substantially = 11 g/m, with a variation of between +15% and -10%.

Claim 7 (original): A method for manufacturing a body, which comprises:

providing sheet metal layers formed of at least partly structured metal foils having a thickness DF of between 10 and 25 μm ;

at least partly brazing the sheet metal layers to one another at brazed connecting points each having a metal foil connection with two of the metal foils forming a wedge;

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filling the wedges with brazing medium having a mass ML in the wedges; and

setting a ratio ML/DF of the mass ML of the brazing medium in each of the wedges to the thickness DF of the metal foils to be substantially between 11 g/m and 16 g/m.

Claim 8 (original): A method for manufacturing a honeycomb body having metal foils with a thickness of between 10 and 25 μm , which comprises connecting the metal foils to each other at a multiplicity of metal foil connections each formed according to claim 2.

Claim 9 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness substantially between ~~[[20]]~~ 10 μm and 25 μm ;

applying glue to the first and second metal foils;

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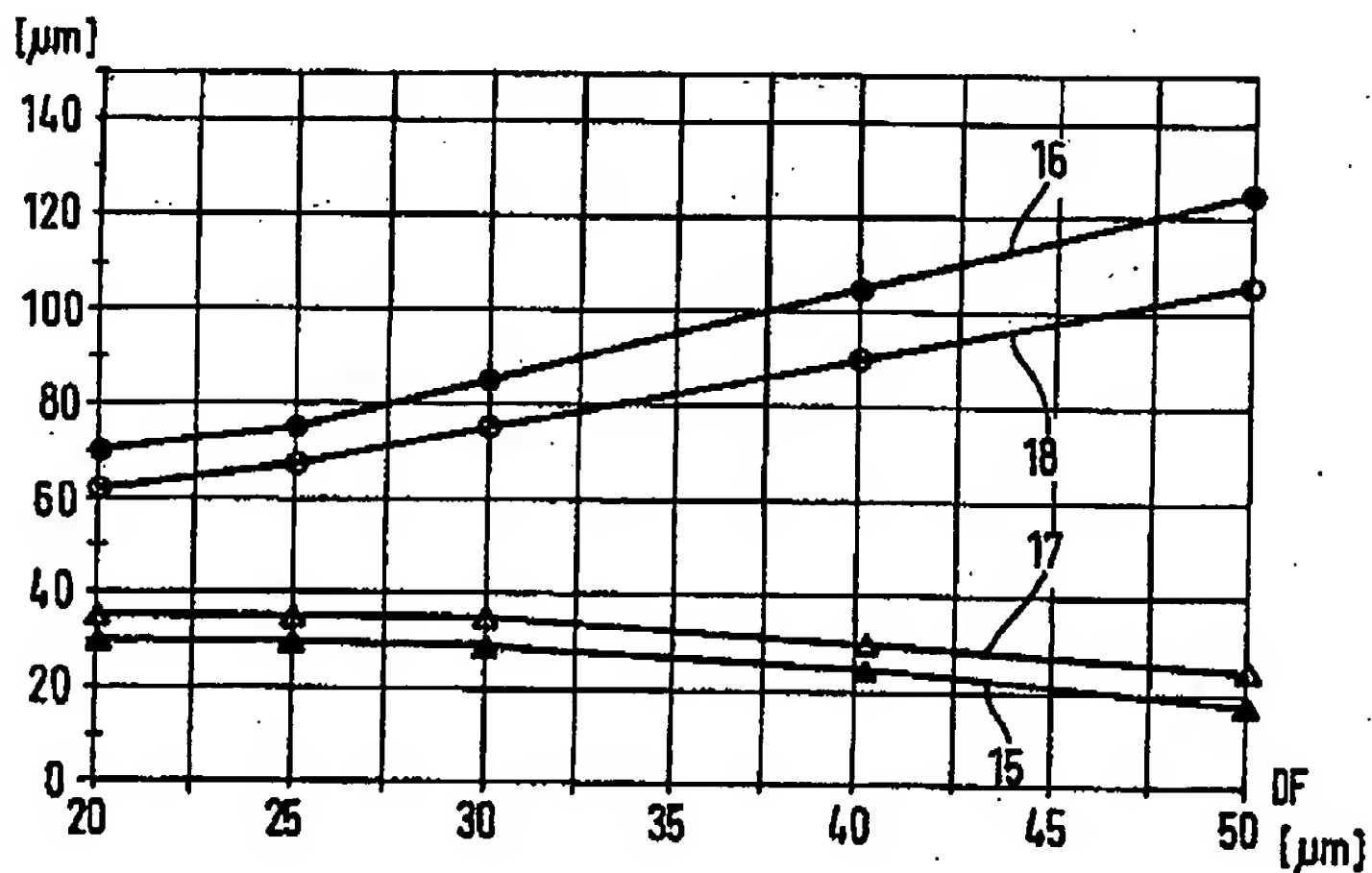
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subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter and a maximum diameter of the metal foil-brazing medium particle fraction in dependence on the thickness of metal foils between lines 15 and 16 on the following graph:

Bandwidth of
Particle Sizes



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with the abscissa representing the foil thickness in μm and the ordinate representing the particle diameter in μm .

Claim 10 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness substantially between $[[20]]$ 10 μm and 25 μm ;

applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

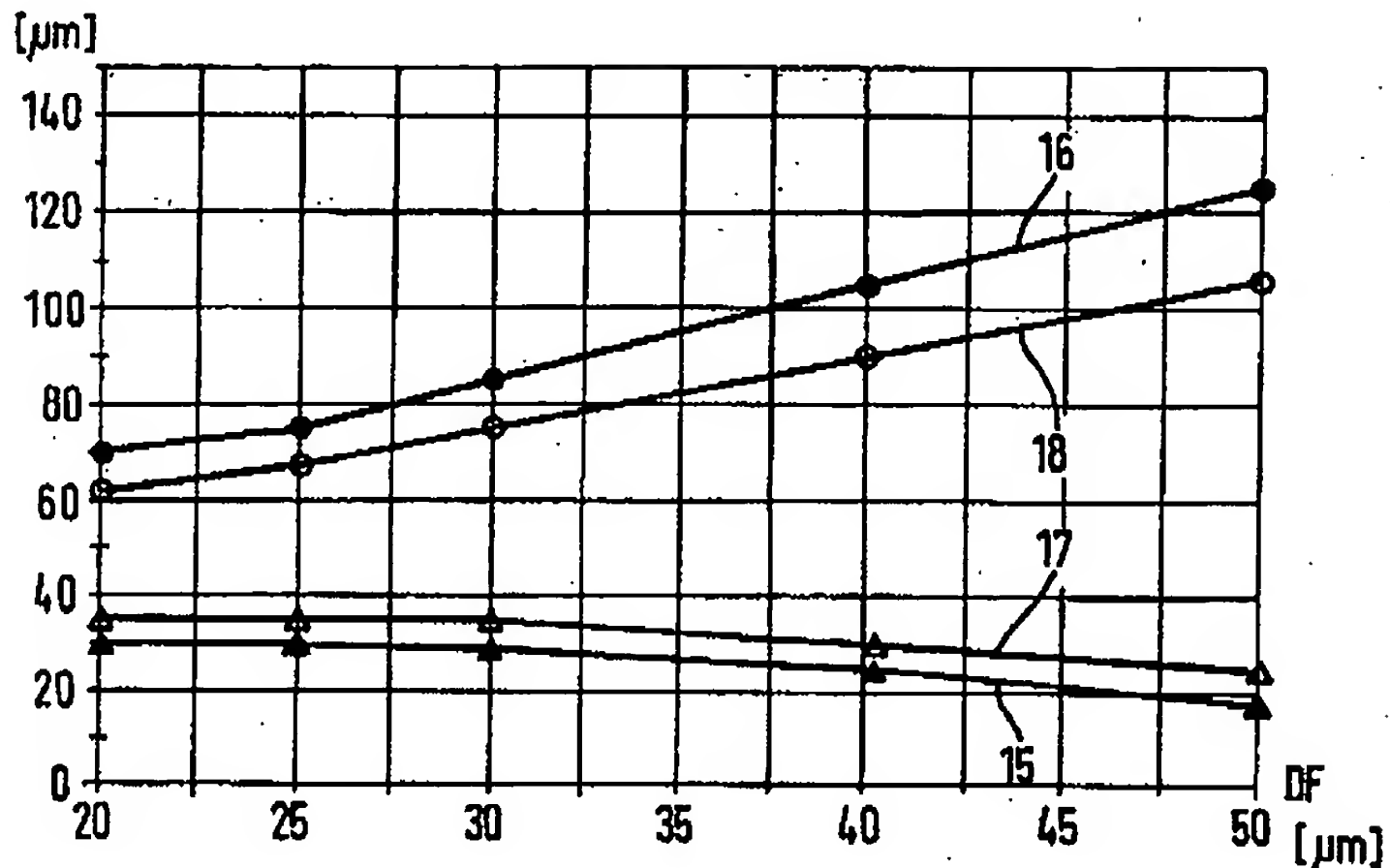
brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter and a maximum diameter of the metal foil-brazing medium particle fraction in dependence on the thickness of metal foils between lines 17 and 18 on the following graph:

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Bandwidth of
Particle Sizes

with the abscissa representing the foil thickness in μm and the ordinate representing the particle diameter in μm .

Claim 11 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness DF substantially between $[[20]]$ $\underline{10}$ μm and $25 \mu\text{m}$;

applying glue to the first and second metal foils;

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subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter MinPD and a maximum diameter MaxPD of the metal foil-brazing medium particle fraction in μm in dependence on the thickness DF of metal foils in μm from the following table:

DF	MinPD	MaxPD
approx. 20	approx. 30	approx. 70
approx. 25	approx. 30	approx. 74

and values located therebetween.

Claim 12 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness DF substantially between ~~[[20]]~~ 10 μm and 25 μm ;

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applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter MinPD and a maximum diameter MaxPD of the metal foil-brazing medium particle fraction in μm in dependence on the thickness DF of metal foils in μm from the following table:

DF	MinPD	MaxPD
approx. 20	approx. 35	approx. 61
approx. 25	approx. 35	approx. 68

and values located therebetween.

Claim 13 and 14 (cancelled).

Claim 15 (original): The method according to claim 1, wherein the first and second metal foils have a thickness of 10 μm .

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Claim 16 (original): The method according to claim 1, wherein the first and second metal foils have a thickness of 20 μm .

Claim 17 (original): The method according to claim 1, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

Claim 18 (original): The method according to claim 2, wherein the first and second metal foils have a thickness of 10 μm .

Claim 19 (original): The method according to claim 2, wherein the first and second metal foils have a thickness of 20 μm .

Claim 20 (original): The method according to claim 2, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

Claim 21 (original): The method according to claim 6, wherein the first and second metal foils have a thickness of 10 μm .

Claim 22 (original): The method according to claim 6, wherein the first and second metal foils have a thickness of 20 μm .

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Claim 23 (original): The method according to claim 6, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

Claim 24 (original): The method according to claim 7, wherein the first and second metal foils have a thickness of 10 μm .

Claim 25 (original): The method according to claim 7, wherein the first and second metal foils have a thickness of 20 μm .

Claim 26 (original): The method according to claim 7, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

Claim 27 (original): The method according to claim 8, wherein the first and second metal foils have a thickness of 10 μm .

Claim 28 (original): The method according to claim 8, wherein the first and second metal foils have a thickness of 20 μm .

Claim 29 (original): The method according to claim 8, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

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Claim 30 (original): The method according to claim 9, wherein the first and second metal foils have a thickness of 10 μm .

Claim 31 (original): The method according to claim 9, wherein the first and second metal foils have a thickness of 20 μm .

Claim 32 (original): The method according to claim 9, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

Claim 33 (original): The method according to claim 10, wherein the first and second metal foils have a thickness of 10 μm .

Claim 34 (original): The method according to claim 10, wherein the first and second metal foils have a thickness of 20 μm .

Claim 35 (original): The method according to claim 10, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

Claim 36 (original): The method according to claim 11, wherein the first and second metal foils have a thickness of 10 μm .

Claim 37 (original): The method according to claim 11, wherein the first and second metal foils have a thickness of 20 μm .

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Claim 38 (original): The method according to claim 11, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

Claim 39 (original): The method according to claim 12, wherein the first and second metal foils have a thickness of 10 μm .

Claim 40 (original): The method according to claim 12, wherein the first and second metal foils have a thickness of 20 μm .

Claim 41 (original): The method according to claim 12, wherein the first and second metal foils have a thickness of between 10 and 20 μm .